Spring 1-2016

BIOB 101N.00C: Discover Biology

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Biology 101: ***Discover Biology*** **Spring 2016 Syllabus**

Class Meets: M & W 9:10-10:00 at Missoula College
Lab meetings: labs meet in ISB 008 on the UM Mountain campus
Section 01: Tuesday 8:10-10:00
Section 02: Tuesday 10:10-12:00

Instructor: Greg Peters. Contact: greg.peters@mso.umt.edu or (406) 207-6154
Office hours: By appointment in HB02 at Missoula College

Required texts:
Lecture: Custom Text available through Missoula College Bookstore or Moodle
Laboratory: Custom Lab manual available through Missoula College bookstore only
* Make sure your text and lab manual are labeled Spring, 2016 *

Course Content:
We will explore topics such as the chemical and cellular bases of life, genetics, evolution, biodiversity, and human impacts on the living world. Important course objectives include developing a deeper understanding of the fascinating features of the living world and helping all of us make well-informed decisions about issues with a biological component.

How to succeed in this course:
Regular attendance in both lecture and lab is critical. Many lab activities cannot be prepared to accommodate one person, and therefore cannot be made up under any circumstances. Reading textbook assignments before lecture will ensure the best understanding of classroom content. Reading lab instructions before lab will help lab move more smoothly and will better prepare students for lab quizzes. Working in groups during lab exercises and in discussions of lecture material is encouraged; students are expected to work alone on all exams, quizzes and written assignments.

Your NetID will provide access to the online Moodle supplement to this course, including course documents, grades, and links to submit some assignments.

Course Policies:
Accommodation for an excused absence will require documentation of extreme circumstances. No early final exams will be given, so make any travel plans accordingly. Late written assignments will lose 1 point per class meeting.

Students registered with DSS will be given disability accommodation during exams. Please contact me one week before each exam if you require any service through DSS. Instructor office hours are time reserved for helping students; come to office hours with any questions.

University policies on drops, adds, changes of grade option, or change to audit status will be followed. Please note that after the 45th day of the semester, such changes are not automatically approved. A grade of C or higher will be considered passing for the P/NP option.

Grading:

Exams (highest 4 @ 100 pts ea)	400 pts	
In class worksheets	60 pts	
Bio-book updates (4 @ 10 pts ea)	40 pts	90-100% = A- to A
Quizzes (highest 10 of 11)	100 pts	80-89% = B- to B+
Lab Presentation	30 pts	70-79% = C- to C+
Plant Growth Lab Report	30 pts	60-69% = D- to D+
Lab Manual	40 pts	<60% = F
Total	700 pts	

Exams:
There will be 4 exams covering the material presented in the main units of the course and a final, comprehensive exam. Your lowest exam score will be dropped from your final grade; therefore, there will be no make-up exams offered. In other words, an absence from an exam will count as your dropped exam.

In Class Worksheets:
Each class will begin with an opportunity to respond to questions related to Biology and end with a chance to reflect on those questions. These activities can only be completed in class. One freebie can be missed with no impact on one's course grade.

Bio-book Update Assignments:
For each unit you will be asked to contribute a paragraph of new or updated content to the class textbook. Specific instructions will be made available in class.

Laboratory:
The laboratory component of this course provides an opportunity for hands-on learning that expands on topics introduced in lecture. Students may attend only the lab section in which they are enrolled. The following features are your lab responsibilities:

Quizzes:
There will be quizzes at the beginning of lab (don't be late) covering material from the previous week's lab.

Presentation:
Near the end of the semester, students will give presentations in lab on current research in Biology. Details will be offered as the project approaches.

Plant Growth Experiment & Lab Report:
The plant growth lab will be evaluated with a formal, written lab report in addition to a lab quiz. Expectations and suggestions are provided in the lab manual.

Lab Manual (Notebook):
Students will be expected to record lab activities through written observations, sketches, interpretation of findings, and personal reflections in their lab manual.

BIOB 101: Course Schedule

Date:	Topic:	Read chapters:	Quiz/ Assignment:
Unit 1: Molecular & Cellular Biology			
1/25	Course Introduction	--	
1/26	*No Lab*		
1/27	Biology; Science as process	1 & 2	
2/1	Chemical basis of life	3 & 4	
2/2	Lab 1. Intro; microscopes		
2/3	Molecules of life	5 & 6	
2/8	A tour of the cell	7 & 8	
2/9	Lab 2. Cells		Quiz 1
2/10	Cell functioning	9 & 10	BioBook update 1
2/15	*No class: Presidents' day*		
2/16	Lab 3. Pondwater		Quiz 2; Notebook
2/17	**Exam I**		
Unit 2: Energy Transformations and Genetics			
2/22	Cellular respiration	11 & 12	
2/23	Lab 4. Energy Transformations 1		Quiz 3
2/24	Photosynthesis	13 & 14	
2/29	Cell division & Cancer	15 & 16	
3/1	Lab 5. Energy in Life 2; Begin Experiment		Quiz 4
3/2	Intro to genetics	17 & 18	
3/7	DNA function	19 & 20	
3/8	Lab 6. Cell division & genetics		Quiz 5
3/9	Genetic engineering	21 & 22	BioBook update 2
3/14	**Exam II**		

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Date:	Topic:	Read chapters:	Quiz/ Assignment:
Unit 3: Evolution and Classification of Life			
3/15	Lab 7. Evolution & Experiment		Quiz 6
3/16	Evolution	23 & 24	
3/21	Mechanisms of evolution	25 & 26	
3/22	Lab 8. Evolution		Quiz 7
3/23	Classification of life	27 & 28	
3/28	Prokaryotes and protists	29 & 30	
3/29	Lab 9. Microbes; conclude experiment		Quiz 8
3/30	Plants and Fungi	31 & 32	
4/4 - 4/8	*Spring Break*		
4/11	Animals	33 & 34	BioBook update 3
4/12	Lab 10. Classification		Quiz 9
4/13	**Exam III**		
Unit 4: Ecology and Humans			
4/18	Ecology & species interactions	35 & 36	Lab Report due
4/19	Lab 11. Ecology		Quiz 10; Notebooks
4/20	Population Biology	37 & 38	
4/25	Human impacts and climate	39 & 40	
4/26	Lab 12. Presentations		Quiz 11
4/27	Biomes	41 & 42	
5/2	Energy flow in living systems	43	BioBook update 4
5/3	*No Lab - optional final review meeting*		
5/4	**Exam IV**		
5/11	**Final Exam**. Wednesday, 10:10-12:10, same lecture room		